

REMARKS

By the present Amendment, claims 18, 19 and 20 are amended to correct minor typographical errors that do not raise new issues. Claims 18 and 20 are revised to correct paragraphing. Claim 19 is revised to add “A” at its beginning. This leaves claims 11-30 pending in the application, with claim 11 being independent.

Finality of Office Action is Premature

The February 10, 2009 Office Action is improperly made final since new grounds of rejection are raised therein, which new grounds were necessitated by arguments alone and not by claim amendments or the submission of new evidence. Claims 13 is rejected in the November 12, 2008 Office Action in view of U.S. Patent No. 5,311,910 to Hasegawa in view of U.S. Patent Publication No. 2004/0238054 to Weber. Based at least in part on arguments demonstrating the Weber publication did not constitute prior art under 35 U.S.C. §102e/103 in view of evidence previously in the record, this rejection is withdrawn and replaced in the February 10, 2009 Office Action with rejections of claim 13 in view of Japanese Patent No. 3092679 A and of claim 17 in view of the Hasegawa patent alone. Such new grounds of rejection preclude making the February 10, 2009 Office Action final. The addition of new claims in the Amendment submitted before that final rejection does not avoid this impropriety since such exception is not provided in MPEP §706.07(a).

Additionally, MPEP 706.07(a) provides:

When applying any 35 U.S.C. §102(e)/103 references against the claims of an application the examiner should anticipate that a statement averring common ownership at the time the invention was made may disqualify any patent or

application applied in a rejection under 35 U.S.C. §103 based on 35 U.S.C. §102(e). If such a statement is filed in reply to the 35 U.S.C. §102(e)/103 rejection and the claims are not amended, the examiner may not make the next Office action final if a new rejection is made.

Since this circumstance applies here, withdrawal of the finality is requested.

Rejections Under 35 U.S.C. §§102 and 103

Claim 11 covers a method for producing a piston accumulator. The method comprises mounting a piston 12 in an accumulator housing 10 for movement along a longitudinal axis 48 of the housing, with the piston separating housing interior into two working chambers 16 and 18 between first and second longitudinal ends of the housing. At least a first shoulder 38 is provided in the housing interior adjacent to but spaced from the first housing longitudinal end. A first cover component 20 is inserted at least partially within the housing through the first longitudinal end when open until its inner surface portion 36 engages the first shoulder 38 preventing further insertion of the first cover component. A first end portion of the housing between the first shoulder and the first longitudinal end is deformed at an acute angle relative to the longitudinal axis against an axial outer circumferential contact surface extending at a corresponding acute angle relative to the longitudinal axis and about an axial outer surface portion of the first cover component to secure the first cover component in the housing with the first cover component sealing the first longitudinal end of the housing closed. The second longitudinal end of the housing is sealed closed.

By performing the method in this manner, the piston accumulator is formed and sealed in a reliable operation that is simple and inexpensive to perform. The deforming of the housing end

portion at an acute angle is particularly simplified by the accumulator housing deformation being at a free end and against an exposed axial surface of the cover component to simplify the operation and the tooling necessary for this deformation.

Claims 11, 12, 14-16, 24 and 25 stand rejected under 35 U.S.C. §102 as being anticipated by U.S. Patent No. 5,311,910 to Hasegawa. The Hasegawa patent is cited for a method for producing a piston accumulator in which a cover component 5 is at least partially inserted within housing 1a through a first longitudinal end when open until an inner surface portion 5c of the first cover engages housing shoulder 1b, and then deforming the first end of housing 1a between first shoulder 1b and the first longitudinal end at an acute angle relative to the longitudinal axis. Fig. 4b is apparently relied upon for showing a forming tool 10 deforming at an acute angle onto the housing 1a against an axial outer contact surface extending at a correspondingly acute angle relative to the longitudinal axis (with the contact surface being the acute angle portion of forming tool 10) and about an outer surface portion of cover component 5. The second longitudinal end of the housing is allegedly sealed. Relative to claim 12, the housing end is alleged to be deformed substantially flush. Relative to claim 14, the cover allegedly tapers outward. Relative to claim 15, the Hasegawa shaping tool is allegedly forced axially. Relative to claim 16, point 1b is allegedly a transition point of different wall thicknesses of the Hasegawa housing. Relative to claim 24, housing 1a is alleged to act as an insertion bevel widening toward the exterior. Relative to claim 25, the cover component has a height twice of the height of the deformed section.

Claims 17-22 and 26-30 stand rejected under 35 U.S.C. §103 as being unpatentable over the Hasegawa patent. In support of these rejections, it is contended that it would be obvious to

form the bevel to taper from the free end edge to form the second end of the accumulator housing in the same manner as the first end described above, to form both ends simultaneously, and to deform the first end portion of an obtuse angle. The Hasegawa deformed section 5a is alleged to extend directly from its first longitudinal end 1a in Fig. 5.

Claims 13 and 23 stand rejected under 35 U.S.C. §103 as being unpatentable over the Hasegawa patent in view of Japanese Patent No. 03092679A to Masanobu. The Masanobu patent is cited in connection with a projection 28 on cover component 26 (Fig. 3) and a positioning tool for positioning the cover in the housing, which the Examiner contends would be obvious to use in the Hasegawa system.

Contrary to the contention made in paragraph 24 of the Office Action, claim 11 recites that the deformation is against a cover component contact surface extending in an acute angle relative to its longitudinal axis. Claim 11, lines 11-14, specifically read as follows:

deforming a first end portion of the housing between the first shoulder and the first longitudinal end at an acute angle relative to the longitudinal axis against an axial outer circumferential contact surface extending at a corresponding acute angle relative to the longitudinal axis and about an axial outer surface portion of the first cover component. (emphasis added).

This claim portion recites that each of the axial outer circumferential contact surface and the axial out surface portion are “of the first cover component”, and thus, part of the first cover component. Since the axial outer circumferential contact surface is part of the first cover component, the deformation must be against that cover component. No other claim interpretation is reasonable or is even proffered in the Office Action.

If the axial outer circumferential contact surface is not required to be part of the cover component, such contact surface would then not be defined relative to other recited limitations and would have been held to be indefinite under 35 U.S.C. §112, second paragraph. No rejection under 35 U.S.C. §112, second paragraph, has been presented.

In contrast, as clearly shown in Figs. 1-4b, the Hasegawa contact surface on the cover component is perpendicular to the longitudinal axis, not at an acute angle. The Hasegawa angle surface on the tool will not satisfy claim 11, since that tool surface is not the cover component.

Claim 11 is then patentably distinguishable over the Hasegawa patent by reciting that the deformation is against a cover component contact surface extending in an acute angle (i.e., an angle less than 90 degrees) relative to its longitudinal axis. In contrast, as clearly shown in Figs. 1-4b, the Hasegawa stepped contact surfaces are perpendicular to the longitudinal axis, and are not at an acute angle.

Thus, reconsideration and withdrawal of the rejection of claim 11 is requested.

Claims 12-28 being dependent upon claim 11, are also allowable for the above reasons. Moreover, these dependent claims recite additional features further distinguishing them over the cited patents.

Claim 12 is further distinguishable by the end edge of the first longitudinal end being deformed to be substantially flush with the outer surface portion surrounded by an acutely angled contact surface. No such flush arrangement is disclosed in the Hasegawa patent.

Claim 13 is further distinguishable by the projection extending axially from the axial outer surface portion surrounded by an acutely angled contact surface of the first cover component. No such projection is disclosed in the Hasegawa patent or the JP patent.

Claim 14 is further distinguishable by the outer cover component tapering along the contact surface, which is an outer axial surface. No such tapering surface in the Hasegawa patent is axial and outer, as claimed. The Hasegawa contact surface is either perpendicular or parallel to the longitudinal axis on the cover component. The Hasegawa surface 5c is not the contact surface for receiving the deformed portion, and that surface tapers (i.e., reduces in size) toward the inside, not toward the outside, as claimed. As noted in the above quoted portion of claim 11, the housing end portion is deformed against the acutely angled contact surface of the first cover component.

Claim 15 is further distinguishable by the deforming being formed by axially forcing a first shaping tool against and over the first longitudinal edge with a positioning bevel engaging the first end portion. None of the cited patents disclose or render obvious this deformation by the claimed axial forcing of the shaping tool. The Hasegawa lateral staking member 10 is only disclosed to move radially, as shown by the arrow in Fig. 4A and the description of being forced “radially inwardly” in column 3, lines 50-51, not axially. No disclosure of an axial force or an analysis demonstrating an inherent axial force in the Hasegawa patent is provided. Such unsupported allegation does adequately support the alleged anticipation.

Claim 16 is further distinguishable by the reduced wall thickness and the transition forming the shoulder within the overall claimed combination.

Claim 17 is further distinguishable by the insertion bevel 50 extending from the free end edge of the housing. No evidence supports the allegation of the claimed bevel at the free end is obvious. The reason of proper positioning is improper hindsight from applicant’s disclosure.

Claim 18 is further distinguishable by the sealing of the second longitudinal end in the same manner as the first longitudinal end. Such sealing of the second longitudinal end is thus distinguishable by the features of claim 11 being also applied to the second end of the housing. Such dual sealing is not obvious and is not adequately shown to be obvious from the Hasegawa patent, as alleged, and is improperly based on hindsight.

Claim 19 is further distinguishable by the second end being formed by an axially movable shaping tool. As noted above, none of the cited patents discloses such second axial shaping tool.

Claim 20 is further distinguishable for the same reasons advanced above relative to claim 18.

Claims 21 and 22 are further distinguishable by the first and second end portions being simultaneously deformed. No such simultaneous deformation of end portions is disclosed or rendered obvious by the cited patents.

Claim 23 is further distinguishable by use of a position tool with a feed bevel. The Masanobu part 13 is not shown to meet the limitations of claim 23, since its function is not clear from the drawings or the partial translation provided.

Claim 24 is further distinguishable in the guiding of the first cover component by an insertion bevel at a free end edge of the first longitudinal edge portion. The Hasegawa patent relied upon for the feature does not have an insertion bevel, particularly in combination with a stop (recited in claim 11 upon which claim 24 depends) and located at a free end edge. The dependency of claim 24 on claim 11 provides the combination of the insertion bevel and the stop.

Claims 25 and 26 are further distinguishable by the relative heights of the cover component or components relative to the deformed sections of the housing. No evidence of

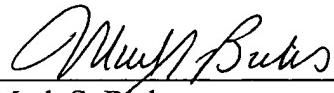
record shows that these limitations are disclosed in or rendered obvious from the Hasegawa patent.

Claim 27 and 28 are further distinguishable by the deformed section or sections being at an obtuse angle. No evidence of record supports the allegation that these limitations are obvious.

Claims 29 and 30 are further distinguished by each deformed section extending directly from the respective longitudinal end. In contrast, the Hasegawa deformed sections in Figures 4A and 4B are spaced from and do not extend directly from the longitudinal ends.

In view of the foregoing, claims 11-30 are allowable. Prompt and favorable action is solicited.

Respectfully submitted,



Mark S. Bicks
Reg. No. 28,770

Roylance, Abrams, Berdo & Goodman, LLP
1300 19th Street, NW, Suite 600
Washington, DC 20036
(202) 659-9076

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